

WHAT IS CLAIMED IS (US) :

1. A pen input/display device, comprising:

an input pen enabling a pen input on a display panel;
infrared transmission means and ultrasonic transmission means provided on the input pen;

infrared receive means and at least two ultrasonic reception means, provided on the display panel, receiving an infrared signal and an ultrasonic signal simultaneously transmitted respectively from the infrared transmission means and the ultrasonic transmission means provided on the input pen, when a pen tip of the input pen is in contact with the display panel; and

display control means computing a contact position of the pen tip on the display panel from a result, containing a time delay, of receiving the ultrasonic signal by the at least two ultrasonic reception means with reference to a time when the infrared receive means receives the infrared signal,

said input pen including pen pressure sensor means sensing pen pressure when the pen tip is in contact with the display panel; and pen pressure information infrared transmission control means controls the infrared transmission means transmit the infrared signal which changes in accordance with the pen pressure.

2. The pen input/display device as set forth in claim 1, wherein the pen pressure information infrared transmission control means controls the infrared transmission means to transmit the infrared signal with varied pulse widths in accordance with the pen pressure.

3. The pen input/display device as set forth in claim 2, wherein:

the input pen further includes sequence input means enabling inputs of a series of pen pressure levels as sorted by frequency of use; and

the pen pressure information infrared transmission control means controls the infrared transmission means to transmit the infrared signal with pulse widths which grow longer in descending sequence of frequency of use of individual pen pressure levels as sorted through the sequence input means.

4. The pen input/display device as set forth in claim 1, wherein the pen pressure information infrared transmission control means controls the infrared transmission means to transmit at least two infrared pulses an interval between which changes in accordance with the pen pressure.

5. The pen input/display device as set forth in claim 1, wherein the pen pressure information infrared transmission control means outputs multiple infrared signal pulses in accordance with the pen pressure.

6. The pen input/display device as set forth in claim 1, wherein the infrared signal represents bit data.

7. The pen input/display device as set forth in claim 5, wherein:

the input pen further includes sequence input means enabling inputs of a series of pen pressure levels as sorted by frequency of use: and

the pen pressure information infrared transmission control means controls the infrared transmission means to transmit the infrared signal over infrared signal output periods which grow longer in descending sequence of frequency of use of individual pen pressure levels as sorted through the sequence input means.

8. The pen input/display device as set forth in claim 6, wherein:

the input pen further includes sequence input means enabling inputs of a series of pen pressure levels as sorted

by frequency of use; and

the pen pressure information infrared transmission control means controls the infrared transmission means to transmit the infrared signal over infrared signal output periods which grow longer in descending sequence of frequency of use of individual pen pressure levels as sorted through the sequence input means.